



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|-----------------------|------------------|
| 10/039,279 | 01/04/2002 | Rajendra S. Yavatkar | 10559-568001 / P12782 | 8329 |

20985 7590 05/17/2006

FISH & RICHARDSON, PC
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022

| |
|----------|
| EXAMINER |
|----------|

HALIYUR, VENKATESH N

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2616

DATE MAILED: 05/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/039,279 | Applicant(s) YAVATKAR ET AL. | |
| | Examiner Venkatesh Haliyur | Art Unit 2616 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2006.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-15 is/are allowed.
- 6) ☒ Claim(s) 16-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendments filed on 02/09/2006 for claims 16-53 have been considered but is ineffective to overcome the reference. Rejection follows.
2. Claims 1-53 are pending in the application.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Regarding claim 27, the limitation "An article comprising a computer-readable medium that stores instructions...." is directed to non-statutory subject matter instead of statutory. Claim 27 appears to be a system claim comprising a computer readable medium that stores software programs executed by the computer processor in the system that defines the structural and functional relationships between the computer program and rest of the computer that permits the computer program's functionality to be realized. Hence appropriate correction is needed to claim 27.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 16,17,20,23,25-53 are rejected under 35 U.S.C. 102(b) as being anticipated by Nair et al [US Pub: 2002/0103921].

Regarding claims 16,23,25-27,31,37-41,46-49,53 Nair et al "Method and system for routing broadband internet traffic" disclosed in their invention a distributed service router (DSR) [item 170 of Fig. 1a] implementing a routing control protocol to route packets between computer networks comprising a control-plane with a processor to implement a central control portion of the control protocol and forwarding-planes [item 120 of Fig 1a] each having a forwarding-plane processor to implement a load sharing (offload) [item 260 of Fig 2, para 0036, 0037,0085] control portion of the control protocol and ports that connect the router to the computer networks and a back-plane[item 220 of Fig 2, para 0037] to connect the control plane to a plurality of forwarding-planes and to enable processing of the packet based on an implementation of the control protocol by the control-plane and the forwarding-plane [Figs. 1-3, para

Art Unit: 2616

0014-0079] with a computer readable storage medium for storing routing functions software (instructions) [items, 225,230,240,245,255 of Fig 2, item 120a, 170a and 160 of Fig. 4, para 0042,0093-0109].

Regarding claims 17,28,32,34,42,50, Nair et al disclosed the offload control portion of the control protocol having instructions to generate an outgoing control message [items 270, 255 of Fig 2, para 0036, 0037,0105-0108].

Regarding claims 6,20,29,33,35,43,51, Nair et al disclosed the offload control portion of the control protocol having instructions to respond to an incoming request control to the control protocol [item 265 of Fig 2, para 0036,0037].

Regarding claims 44, Nair et al disclosed a plurality of ports include a plurality of virtual interfaces on a physical interface [para 0080,0081].

Regarding claims 30,36,45,52, Nair et al disclosed forwarding-plane processor includes a processing engine to implement a plurality of packet processing functions [item 310 of Fig 3] for routing the packet and a general purpose processor [item 408 of Fig 4] to implement the offload control portion of the control protocol [Figs 2-4, para 0035-0040,0085-0088,0091,0092].

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious

Art Unit: 2616

at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18,19,21,22,24, are rejected under 35 U.S.C. 103(a) as being unpatentable over Nair et al [US Pub: 2002/0103921] in view of Alfieri et al [US Pub: 2002/0099849].

Regarding claims 21, Nair et al disclosed that the control plane handles the incoming and outgoing control message flow (**requests and responses**) in their system [Para 0037-0040,0046-0056], but fails to disclose control protocol is open shortest path first (OSPF) protocol. However, Alfieri et al in their invention "Dense virtual router packet switching" disclosed a method and system for distributed VPRN that handles different routing protocols including OSPF and message flows [**Abstract, Fig. 5, Para 0006-0009,0019-0021**].

Therefore it would have been obvious for one of ordinary skill in the art at the time the invention was made to use the teachings of Alfieri et al to include OSPF protocol in the system of Nair et al to establish control flow using open shortest path first protocol for generating outgoing HELLO control message and to receive incoming link status (**LSA**) request message.

Regarding claims 19,22, Nair et al disclosed that the control protocol is used for setting up of paths and handles incoming and outgoing (**requests and responses**) control messages in their system [**Para 0037-0040**], but fails to disclose resource reservation protocol and the generation of the outgoing control message (**RSVP**).

Art Unit: 2616

However, Alfieri et al disclosed different routing protocols including for setting up VPRN paths RSVP [**Abstract, Fig. 2, Para 0023-0027**].

Therefore it would have been obvious for one of ordinary skill in the art at the time the invention was made to use the teachings of Alfieri et al to include RSVP in the system of Nair et al to establish paths using RSVP for generating outgoing PATH control message and to receive incoming RESV request message.

Regarding claims 24, Nair et al disclosed processing of TCP/IP, UDP and MPLS protocols in their system [Para 0046-0056], but fails to disclose OPEN SHORTEST PATH FIRST (OSPF) and RESOURCE RESERVATION (RSVP) protocols. However, Alfieri et al disclosed OSPF and RSVP protocols in their system [**Abstract, Fig. 2 & 5, Para 0020-0027**].

Therefore it would have been obvious for one of ordinary skill in the art at the time the invention was made to use the teachings of Alfieri et al to include OSPF and RSVP protocols in the system of Nair et al to generate outgoing control messages and receive incoming control messages.

Allowable Subject Matter

7. Claims 1-15 allowable over prior art.

Response to Arguments

8. Applicant's argument, see remarks, filed 02/09/2006, with respect to claims 1-15 have been fully considered and are persuasive. The rejections under 35 USC 102(e) and 103(a) for claims 1-15 have been withdrawn.

9. Applicant's arguments, see remarks, filed on 02/09/2006 for claims 16-53 have been fully considered but they are not persuasive because applicant's arguments for rejection of claims 16-53 directs to similar arguments given for claim 1 rejection, but examiner disagrees with this as the limitations recited in claims 16-53 are not the same as the limitations of claim 1. Applicant should submit an argument pointing out disagreements with the examiner's contentions for all the claims. Applicant must also discuss the references applied against the claims, explaining how the claims avoid the references or distinguish from them.

10. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2616

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

11. Any inquiry concerning this communication or earlier communications should be directed to the attention to Venkatesh Haliyur whose phone number is 571-272-8616. The examiner can normally be reached on Monday-Friday from 9:00AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached @ (571)-272-3139. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (571)-272-2600 or fax to 571-273-8300.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197(toll-free).

Venkatesh Haliyur

Patent Examiner

MW
04/20/06

Ajit Patel
Ajit Patel
Primary Examiner
Primary Examiner